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EXAMINER

ANYA, CHARLES E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,275	Applicant(s) HANSEN ET AL.	
	Examiner CHARLES E. ANYA	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3/ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-9 and 11-16 are pending in this application.

Specification

Applicant has failed to provide antecedent basis for the claimed terminology “computer readable media” (claim 9). Therefore, the question becomes whether non-statutory embodiments would be fairly conveyed to one of ordinary skill given the terminology utilized. Therefore, the Specification is objected to under 37 CFR 1.75 (see MPEP 608.01(o)).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 9 is directed to non-statutory subject matter.**

Given the specification, claim 9 is rejected under 101 as failing to be limited to embodiments which fall within a statutory category. In this instance, since the specification does not provide antecedent basis for the claimed “computer readable medium” it is not clear whether “computer readable medium” is directed to statutory subject matter.

Therefore, it would appear reasonable to interpret “computer readable medium” as transmission media or other forms of propagation medium and as such fails to be an appropriate manufacture under 35 USC 101 in the context of computer-related inventions.

This claim could be amended such that it is directed to statutory subject matter by amending the specification to specifically define and disclose the claimed “computer readable medium” including disclosing the “computer readable medium” to exclude transmission media or other forms of propagation media or amending claim 9 to include “non-transitory computer readable medium”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11, 12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter referred to as AAPA pages 6-7 of the specification) in view of COMPONENTXCHNAGE: AN E-EXCHANGE FOR SOFTWARE COMPONENTS to Varadarajan et al. (pages 1-13).

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4. As to claim 1, AAPA teaches a method to enable access to a function of a real world object represented as an Aspect Object in a Control System (Computerized System 10), which comprises an Aspect System (figures 1/2 page 6 lines 25 – 33, page 7 lines 1 – 33), the method comprising:

calling an interface of the Aspect Object in the Control System, from a client application (“...invoking a method...” page 6 lines 31 – 33, “...QueryAspectInterface...” page 7 lines 1 – 2);

requesting a representation of the Aspect Object and Aspects associated with the Aspect Object (Aspect Object 3 page 7 lines 17 – 24);

requesting a representation of an Aspect Category and an Aspect Type (Aspect Category 23 page 7 lines 22 – 29);

requesting an Aspect System Object by the web client application wherein the function of the real world object is enabled for access (Aspect System Object 8 page 7 lines 17 – 20);

querying a reference to an interface of the Aspect System Object with a client application in a client device in the Control System (“...client application 1 queries an Aspect Object 3 for a reference to an interface that provides the function...” page 6 lines 25 – 33), wherein the Aspect Object comprises a Composite Object comprising Aspects of the Aspect Object (Aspect Object 3);

carrying out with the client application a table look-up of a reference to the Aspects of the Aspect Object (Table Look-up 4 page 7 lines 2 – 33); and

accessing with the client a function of the real world object (“...enable access traditional objects...” page 7 lines 1 – 15, “...Access to functions...” page 7 lines 32 – 33).

AAPA is silent with reference to calling an interface of an Aspect Object in a Control System, through the Internet or an intranet, from a web client application in an external client device, downloading to the client device a representation of the Aspect Object and Aspects associated with the Aspect Object, downloading to the client device a representation of an Aspect Category and an Aspect Type and downloading a representation of an Aspect System Object to the client device hosting the web client application wherein a function of the real world object is enabled for access.

Varadarajan teaches calling an interface of an Aspect Object in a Control System, through the Internet or an intranet (“...World Wide Web...” page 1 Abstract, “...HTTP POST method...” page 8 section 4.3), from a web client application in an external client device (“...interface of the matchmaking module...client query...” page 5 section 3, “...web-based query interface...” page 8 section 4.2/4.3), downloading to the client device a representation of the Aspect Object and Aspects associated with the Aspect Object (“...component can used either by downloading it...” page 1 Abstract, “...component is downloaded to the client...” page 2 section 1), downloading to the client device a representation of an Aspect Category and an Aspect Type (“...returns those components...” page 5 section 3) and downloading a representation of an Aspect System Object to the client device hosting the web client application wherein a function of the real world object is enabled for access (“...component can used either by

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downloading it..." page 1 Abstract, "...component is downloaded to the client and later integrated in the client application..." page 2 section 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

5. As to claim 2, Varadarajan teaches the method according to claim 1, wherein the web client application is a web browser ("...web-based query interface...browser" page 8 section 4.2)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

6. As to claim 3, Varadarajan teaches the method according to claim 2, wherein the calling further comprises passing an interface type as a parameter ("...query..." page 4 section 2.2, "...client query..." Page 5 section 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

7. As to claim 4, Varadarajan teaches the method according to claim 1, further comprising: initializing the Aspect Object in the client device and initializing the Aspect System Object in the client device (“...component...and integrated into the client application...” page 2 “...component...integrated in the client application...” page 2 section 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

8. As to claim 5, Varadarajan teaches the method according to claim 1, further comprising: downloading first and second software components to the client device is with a web server (“...Java Servlets API...” page 8 sections 4.1/4.3: NOTE: Servlet API,

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contained in the Java package hierarchy javax.servlet, defines the expected interactions of a Web Server and a Servlet).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

9. As to claim 6, Varadarajan teaches the method according to claim 1, further comprising: downloading an Aspect System Object, wherein downloading the Aspect System Object comprises matching the interface type with an interface type listed in the Aspect Category and the Aspect Type (“...best match...” page 2 section 1, “...Matchmaking involves comparing...” page 5 section 3, “...Matchmaking...” page 8 section 4.3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify of the system of AAPA with the teaching of Varadarajan because the teaching of Varadarajan would improve the system of AAPA by providing Web-based service for retrieving or downloading data or file to a local system from a remote system that allows a user the benefit of not having to locally and permanently stored needed data or file.

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10. As to claim 7, AAPA teaches the method according to claim 1, wherein a function of the real world object is a start, stop, open or close function (“...functions are open, close start...” page 7 lines 27 – 33).

11. As to claim 8, AAPA teaches the method according to claim 1, wherein the client device is a personal computer, a mobile phone, a handheld device or a Personal Digital Assistant (PDA) (“...the client...” page 2 section 1).

12. As to claim 9, see the rejection of claim 1 above.

13. As to claims 9 and 11, claims 9 and 11 are rejected for the same reason as claim 1 because claims 9 and 11 are computer program product and control system claims respectively of claim 1.

14. As to claim 12, see the rejection of claim 2 above.

15. As to claims 14 and 15, see the rejection of claims 7 and 8 respectively.

16. As to claim 16, see the rejection of claims 1 and 4 above.

17. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter referred to as AAPA pages 6-7 of the

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specification) in view of COMPONENTXCHNAGE: AN E-EXCHANGE FOR SOFTWARE COMPONENTS issued to Varadarajan et al. (pages 1-13) to Varadarajan et al. as applied to claim 12 above, and further in view of U.S. Pat. No. 6,640,140 B1 issued to Lindner et al.

18. As to claim 13, Varadarajan teaches the first and second software component (“...component can used either by downloading it...” page 1 Abstract, “...component is downloaded to the client...” page 2 section 1).

Lindner teaches the Control System according to claim 12, wherein the Control System comprise a web server, which handles the download of files to the client device (“...web server...” Col. 2 Ln. 51 – 58, Web Server 12 Col. 4 Ln. 20 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Varadarajan and AAPA with the teaching of Lindner because the teaching of Lindner would improve the system of Varadarajan and AAPA by providing an industrial control or automation system for performing a control function relevant to an industrial control or automated system and for monitoring control system information and data associated with the control function (Lindner Col. 1 Ln. 6 – 14).

Response to Arguments

Applicant's arguments filed 02/12/10 have been fully considered but they are not persuasive.

Applicant argues in substance that (1) the 101 rejection of claim 9 is improper and as such should be withdrawn, (2) the combination of the AAPA and Varadarajan prior arts do not teach querying for a reference to an interface of the Aspect Object with a web client application in a client device external to the Control System through the internet or an intranet and (3) the Varadarajan prior art teaching is only directed a scheme for buying and selling software rather than the claimed invention of a client accessing functions of a real world object in a control system.

The Examiner respectfully traverses Applicant's arguments:

As to point (1), the disclosure (on page 4, lines 8-22) does not describe the claimed "computer readable medium" to exclude non statutory subject matter. Specifically, the specification does not disclose the claimed "computer readable medium" to exclude transmission or communication media (e.g. carrier wave, propagation media etc.).

As to point (2), it appears that applicant is arguing against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The AAPA prior art discloses a client application (Client Application 1) in a computer system (Computerized System 10) gets access to a function associated with an Aspect of an Aspect Object representing a real world object (Real World Object 11). The client application queries an Aspect Object for a reference to an interface that

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provides the function. The Aspect Object is queried by invoking a method of a known interface of the Aspect Object. The reference to the interface of the Aspect Object is found by searching a look-up table (Table Look-Up 4), the reference is returned to the client application.

The querying for references through the look-up table described above is functionally equivalent to the querying steps of claimed invention, however the AAPA prior art does not disclose that its client application is web client application and that the client application could download representation of Aspect Object, hence the introduction of the Varadarajan prior art.

The Varadarajan prior art discloses a process for searching for and downloading Aspect components into a web client application remotely over a network (Abstract page 1). Web based query interface provided in a server accepts requirements from the web client application as input and returns or downloads a list of Aspect component that satisfy the requirements (figure 1). The searching and downloading of Aspect components is done through Matchmaking module. The matchmaking module consists of a Dispatcher component and matchmaking components. The Dispatcher receives a **set of aspect category specific queries**, which it forwards to appropriate matchmakers component. This matchmaking component is implemented as a plain Java class and it provides a static method '*dispatch*' for **dispatching client queries** to various matchmaking components. All matchmakers are implemented as Query Servlets and the Dispatcher interacts with them using the HTTP POST method. The Dispatcher iterates over the set of **aspect category specific queries** and sends each

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query to the corresponding matchmaker as part of the HTTP payload. The Dispatcher identifies the appropriate matchmaking component for a given input query by following a standard convention for naming the matchmaking component. The Dispatcher determines the final result of matchmaking by computing the intersection of the results returned by individual matchmakers. Aspect component is returned as part of the result of the aspect category specific queries. The matchmaking component sends the results to the Dispatcher component.

The web client application querying for Aspect components over the network is functionally equivalent to the claimed web client application querying step of Aspect Object via the internet or intranet.

As to point (3), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Although the use of the Varadarajan prior art discloses a scheme for buying and selling software, it does not negate the fact that it primarily discloses a process for a web client application to query for Aspect components over the internet/network. In essence the Varadarajan prior art discloses how to resolve access to an aspect of an aspect object utilizing internet technology.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES E. ANYA whose telephone number is (571)272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles E Anya/
Examiner, Art Unit 2194

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